



ENGINEERING TECHNICIAN I/II

Purpose:

To actively support and uphold the City's stated mission and values. To perform a variety of technical duties involved in the management of the City Geographic Information System (GIS) database, digital mapping records and databases, civil engineering and computer-aided design (CAD) drafting, providing civil engineering and property information, and issuing permits for work in public rights-of-way.

Distinguishing Characteristics:

Engineering Technician I

The Engineering Technician I is the entry-level class in the Engineering Technician series. This class is distinguished from the Engineering Technician II by the performance of more routine tasks and duties assigned to positions within the series related to providing engineering information and maintaining an efficient City GIS mapping and record-keeping operation, utilizing a basic understanding of civil engineering practices.

Engineering Technician II

The Engineering Technician II is the full journey level class within the series. Employees within this class are distinguished from the Engineering Technician I by the performance of the full range of duties as assigned including more complex work assignments. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work unit.

Positions in these classes are flexibly staffed. Appointment to the Engineering Technician II level requires that the employee: is satisfactorily performing the full range of duties assigned to the II level class, is off probation, and meets the minimum requirements for the class.

Supervision Received and Exercised:

Receives general supervision from the Principal Civil Engineer, Engineering Services Administrator, Engineering Systems Supervisor, or from other supervisory or management staff.

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Revised July 2000

Revised March 2004 (update duty statements and qualifications)

Revised August 2005 (update job description)

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The Engineering Technician II may exercise functional and technical supervision over lower level and temporary staff.

Examples of Duties:

This class specification is intended to indicate the basic nature of positions allocated to the class and examples of typical duties that may be assigned. It does not imply that all positions within the class perform all of the duties listed, nor does it necessarily list all possible duties that may be assigned.

Duties may include, but are not limited to, the following:

- Provide technical engineering and property information to the public, other City departments, and outside agencies including architects, engineers, developers, designers, and utility companies.
- Research a variety of engineering and real estate records in answering inquiries including legal descriptions, civil plans, blueprints, as-builts, and various other office files.
- Maintain and update engineering databases of engineering drawings, land and utility record maps, and other associated databases utilizing computer aided design tools database applications, scanning applications, and other computer software and hardware.
- Perform routine design/drafting operations for engineering projects.
- Operate GIS/CAD workstation to research City GIS database on subdivisions, developments, and capital improvement projects; implement computer plotting as required.
- Assist in assigning the City's Addressing Policy; compile monthly reports of new address or changes for review and approval.
- Assist in processing permits for work in public right of ways.
- Assist the public in establishing new utility services; authorize and issue orders for water and sewer services.
- Issue clearance for occupancy for residential and commercial sites.
- Prepare and process agreements and contracts for Capital Improvement Projects.
- Prepare and process payments for contracted services.

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- Prepare and process funding adjustments to maintain funding in accordance with contractual obligations.
- Maintain Capital Improvement Project database for pertinent data to track project activities, funding, and payments.
- Perform related duties as assigned.

When assigned to GIS Mapping:

- Maintain and update City GIS master database of landbase, utility, infrastructure, city-wide control, and custom digital maps and data, digital aerials, and other associated databases utilizing GIS data editing and maintenance applications, CAD editing applications, internet/intranet web applications, and other computer software.
- Ensure spatial accuracy and data quality of geospatial and attribute data encoding to the City GIS database; performs high accuracy geospatial mapping by coordinate geometry (COGO) mapping techniques, links attributes to geospatial objects, and edits attribute database.
- Research and comprehend a variety of civil engineering and real estate records to update the City GIS database including subdivision plats, legal descriptions, civil engineering plans and as-builts, blueprints, aerials, field checks, work orders, address reports, and other civil engineering office files.
- Access and utilize permit and property management system, engineering document management system, web-based parcel management systems, and other IT and GIS databases for records research.
- Provide City GIS database information and data for use by the public, other city departments, and outside agencies including architects, civil engineers, land surveyors, developers, designers, planners, appraisers, utility companies, other municipalities, and federal, state, and county governments.
- Operate GIS/CAD workstation to update City GIS database as new data is received on new subdivisions, developments, capital improvement projects; implement computer plotting as required; maintain backups and other computer operating system, file system, and application issues.
- Provide specialized and custom GIS and digital maps, GIS data extractions, digital imagery, and specialized plotting capabilities for internal and external customers using GIS, CAD, digital image editing and other software.
- Assist in quality control, quality assurance, and system maintenance processes in the GIS data production routines including the processing of

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completed GIS map updates, commit updates to master repository, initiate off-hours batch processes, startup and shutdown of production PC's, workstations, and servers, and check work of temporary workers and contracted data products.

- Assist in large-scale corrective processes of the City GIS database and related digital mapping and data documents, including research and verification from source documents.
- Provide civil engineering design/drafting GIS support for civil engineering projects.
- Perform related duties as assigned.

Experience and Training Guidelines:

Any combination of experience and training that would likely provide the required knowledge and abilities is qualifying. The hiring department may include job related experience, training or license and certification preferences at the time of recruitment. A typical way to obtain the knowledge and abilities would be:

Experience:

When assigned to Engineering Customer Service Counter:

Engineering Technician I

One year of experience in a civil engineering environment with public contact experience and a basic understanding of civil engineering practices, including some experience working with GIS, CAD and/or civil engineering records.

Engineering Technician II

Three years of experience in civil engineering practices including some experience in the utilization of a geographic information system-(GIS) to input, retrieve and research geospatial and tabular data, and public contact experience within a municipal civil engineering department comparable to that of an Engineering Technician I is desirable.

When assigned to GIS Mapping:

Engineering Technician I

One year of experience in a GIS mapping or civil engineering environment with subdivision plat or civil engineering plan reading, and GIS mapping or CAD drafting of landbase maps, utility maps, or civil engineering plans experience.

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Engineering Technician II

Three years of experience in GIS production mapping practices including experience in the digital mapping of subdivision plats, civil engineering plans and real estate records to a GIS database, including input and retrieval of geospatial and tabular data, and GIS production experience within a municipal GIS department comparable to that of an Engineering Technician I is desirable.

Training:

Engineering Technician I

Equivalent to the completion of the twelfth grade supplemented by some college level course work or training in GIS, land surveying, computer science, civil engineering, CAD drafting, or a related field.

Engineering Technician II

Equivalent to the completion of the twelfth grade supplemented by college level course work or training in GIS, land surveying, computer science, civil engineering, CAD drafting, or a related field. A certificate of completion from an accredited college or university in the specified disciplines is desirable.

This position is included in the City's classified service, pursuant to City of Tempe Personnel Rules and Regulations, Rule 1, Section 103.

Job Code: 6171 / 6172

FLSA: Non-Exempt